

Two new South African species of *Afrocamilla* Barraclough (Diptera: Schizophora: Camillidae)

by

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ABSTRACT

Two new species of *Afrocamilla* are described from South Africa: *danielssoni* from KwaZulu-Natal and *malgasensis* from the Western Cape. It is possible that *danielssoni* is saprophagous on the fallen fruit of *Barringtonia* trees. *A. carolae* is newly recorded from Stormsriver Pass in the Eastern Cape. *A. danielssoni* probably represents a previously unrecognised species group in the southern African fauna, and differs from all named South African species in having only a single vibrissa.

INTRODUCTION

Shortly after the publication of my paper revising the southern African species of *Afrocamilla* (Barraclough 1997), I received a loan of assorted South African acalyprate material from the Museum of Zoology, Lund, Sweden. Amongst this material were three females of *Afrocamilla*, two of which represented new species. These two species are described in this paper which should be read in conjunction with my 1997 paper; discussion of material and methods is not repeated here. All material is deposited in the Museum of Zoology, Lund. I have not dissected the holotypes of *A. danielssoni* and *A. malgasensis*, as both are unique specimens; profile and dorsal head views of *A. malgasensis* are similar to those figured for *A. artopenna* Barraclough, 1997 (Barraclough 1997: 27, 28).

The likelihood that both *A. danielssoni* and *A. malgasensis* are not associated with hyrax latrines or the dung of other small mammals is significant. It seems increasingly likely that in the afrotropics at least, *Afrocamilla* is sometimes saprophagous.

TAXONOMY

Afrocamilla carolae Barraclough, 1997

Afrocamilla carolae Barraclough, 1997: 37.

Material examined: SOUTH AFRICA: **Eastern Cape**: 1 ♀, Tsitsikama N. P., Stormsriver Pass, 33°59'S:23°55'E, 19.x.1994, loc. 26, R. Danielsson (MZLU).

Discussion: This single female is provisionally identified as *A. carolae*, pending the collection of additional material, especially males, from the same population. *A. carolae* was previously known only from Mpofu Game Reserve near Fort Beaufort in the Eastern Cape (see Barraclough 1997: 37). The specimen differs from *A. carolae* mainly in four character states, although three of these relate to coloration and may

not be significant: face and facial ridges entirely yellow-brown; humeral callus mainly dark; mid and hind femora brown-tinged on apical four-fifths; cheek height in profile 0.3–0.4 X length of third antennal segment. The Stormsriver Pass is about 280 km SW of the type locality of *A. carolae*, and is climatically and ecologically significantly different, with perennial rainfall and afromontane forest.

***Afrocamilla danielssoni* sp. n.**

Figs 1–2

Etymology: Named for Roy Danielsson, collector of the holotype.

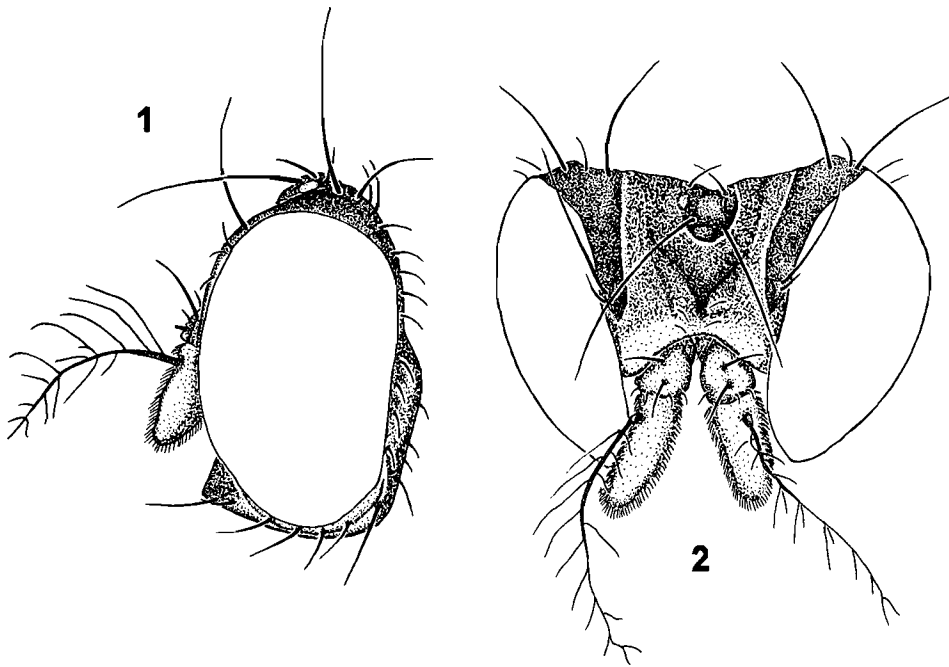
Holotype ♀ : SOUTH AFRICA: **KwaZulu-Natal:** 'RSA: Natal, 17 km NE / Empangeni, Nseleni River / 28°42'S, 32°01'E, / 24. X. 1994 loc.32 / leg. R. Danielsson'; 'HOLOTYPE ♀ / *Afrocamilla* / *danielssoni* / Barraclough, 1998' [Rectangular card, red perimeter]. In MZLU. In good condition.

Description (based on unique female holotype):

Dimensions (in mm): Body length (2.4); wing length (2.0).

Colour/Pollinosity: Head predominantly dark brown to black, but anterior two-fifths of frons and narrow area around vertical bristles yellow-brown, while entire cheek, facial ridge, about upper two-thirds of facial region, first and second antennal segments and basal three-fifths of third segment yellowish; pollinosity largely absent, faintly silver on occiput. Thorax mainly dark brown to black, mesonotum with metallic purple and blue reflections on posterior half, but area of humeral callus, lateral sections of scutum immediately posterior to transverse suture, postalar callus and margin of scutellum yellow-brown; pollinosity fairly dense and gold on scutellum, otherwise restricted to about posterior third of pleuron (including posterior third of sternopleuron), where it ranges from silver below to brown above. Legs mainly pale yellow to pale yellow-brown, but mid and hind coxae medium to dark brown, while apical two-fifths of mid-femur and apical three-fifths of hind femur tinged with brown. Wing membrane virtually hyaline, veins yellow to pale yellow-brown; transverse basal fascia medium to dark brown, narrower anteriorly with antero-apical extent extending somewhat beyond humeral break and expanded to about 1.5 X anterior width at posterior margin. Abdomen dark brown to black with metallic purple and blue reflections; T2 with relatively dense brown pollinosity.

Head (Figs 1 & 2): Eye margin smoothly rounded anterodorsally in profile. Frons moderately short and broad in dorsal view, length at midline almost three-quarters maximum width (Fig. 2). Width of face and parafacials together, at mid-height, subequal to length of antenna. Antenna with short ventral rays along apical four-fifths of arista, longest dorsal rays about 0.8 X length of third antennal segment. Upper orbital plate inconspicuously developed anteriorly, here falling short of ptilinal suture by about 1.2 X length of ocellar triangle, maximum width (near vertex) about 1.2 X width of ocellar triangle (Fig. 2). Postocellar bristles weakly to moderately developed, length about two-thirds that of ocellar triangle (Fig. 2). Ocellar triangle moderately raised above upper eye margin in profile, distance about 0.7 X length of second antennal segment. Proclinate fronto-orbital bristle absent, anterior reclinate fronto-orbital present and less than one-tenth length of posterior bristle. One vibrissa



Figs 1–2. *Afrocamilla danielssoni* sp. n., profile and dorsal view of head, showing details of shape, coloration and all vestiture.

present. Cheek markedly narrowed, height in profile less than $0.1 \times$ length of third antennal segment (Fig. 1).

Thorax: Apical scutellar marginal bristles well developed, just more than twice length and strength of basal marginals. Fore femur with one well-developed anteroventral spine at apical two-fifths, length about $0.9 \times$ maximum femoral diameter; posterodorsal and posteroventral bristles positioned almost halfway between spine and femoral apex, posterodorsal and posteroventral moderately developed but posteroventral slightly more strongly so. Mid tibia without dorsal pre-apical bristle. Wing not markedly slender.

Abdomen: T2 median marginal bristles about $1.5 \times$ length of T1+T2.

Female postabdomen: Not dissected.

Discussion: Although no biological data are available for *A. danielssoni*, it is probably saprophagous. It was collected at the Nseleni River (almost certainly the Nseleni Nature Reserve), 15 km N of Empangeni, an area dominated by riparian vegetation, mainly *Barringtonia racemosa* (L.) Sprengel trees along the river running through the reserve. I have visited this reserve on several occasions, and observed that there is usually an abundance of rotting fruit on the ground below the *Barringtonia* trees. It is likely that *A. danielssoni* was swept from near or off rotting fruit.

Afrocamilla danielssoni does not belong to any of the four groups of *Afrocamilla* species mooted previously for the southern African fauna (Barraclough 1997: 25). In

some character states, *danielssoni* is similar to the West African species *A. exculta* Barraclough, 1997, from Gambia. Both *danielssoni* and *exculta* have one vibrissa, the cheek greatly narrowed in profile, and the proclinate fronto-orbital bristle absent. However, *A. exculta* differs strongly from *danielssoni* in having the basal transverse fascia of the wing extending over the entire extent of the costal and subcostal cells, and the upper orbital plate reaching the ptilinal suture.

In my key to the southern African species of *Afrocamilla* (Barraclough 1997: 28), *A. danielssoni* runs to couplet three, where it is immediately distinguished from both *A. sinseta* Barraclough, 1997 and *A. carolae* Barraclough, 1997, by the very shallow cheek in profile (less than 0.1 X the length of the third antennal segment) and the single vibrissa.

***Afrocamilla malgasensis* sp. n.**

Etymology: The species name refers to the type locality, Malgas, in the southwestern Cape.

Holotype ♀ : SOUTH AFRICA: **Western Cape:** 'RSA: Cape Prov. / Malgas, 40 m / 34°20'S, 20°30'E / 11-13.X.1994 loc.14 / leg. R. Danielsson'; 'HOLOTYPE ♀ / *Afrocamilla malgasensis* / Barraclough, 1998' [Rectangular card, red perimeter]. In MZLU. In fair condition; right antenna missing and some of the frons bristles missing or damaged.

Description (based on unique female holotype):

Dimensions (in mm): Body length (2.7); wing length (2.1).

Colour/Pollinosity: Head predominantly dark yellow-brown to dark brown, but about anterior half of frons, anterior two-thirds of cheek, upper two-fifths of medial facial region and first two antennal segments paler yellow-brown; pollinosity yellow on occiput and more densely yellow to brown on upper two-fifths of facial region. Thorax mainly medium to dark brown, but a noticeably paler yellow-brown on entire prescutum between dorsocentral rows, although pale colour more expansive anteriorly such that medial half of each humeral callus is also pale, and yellow-brown colouring extends backwards as a short, narrow streak onto scutum behind each anterior dorsocentral bristle; scutellum yellow-brown on about apical three-sevenths; pollinosity yellow on scutellum, silver along posteroventral margin of sternopleuron and more broadly pollinose (but brown) between haltere and wing base. Legs mostly pale yellow, but mid and hind femora brown on apical four-fifths and three-fifths respectively, and mid and hind tibiae yellow-brown. Wing membrane pale, smoky yellow, veins entirely pale yellow; transverse basal fascia medium to dark brown, appearing narrower anteriorly with antero-apical extent just beyond humeral break, and markedly expanded towards posterior margin. Abdomen dark brown to black with faint purple metallic reflections; T2 with sparse brown pollinosity.

Head: Eye margin relatively abruptly angled anterodorsally in profile. Frons short and broad in dorsal view, length at midline about 0.6 X maximum width. Width of face and parafacials together, at mid-height, about 1.4 X length of antenna. Antenna with short ventral rays along apical half to two-thirds of arista, longest dorsal rays about 0.9–1.0 X length of third antennal segment. Upper orbital plate

inconspicuously developed anteriorly (sharply pointed), here falling short of ptilinal suture by about length of ocellar triangle, maximum width (near vertex) about 1.2 X width of ocellar triangle. Postocellar bristles strongly developed, length about 1.5 X that of ocellar triangle. Ocellar triangle moderately to well raised above upper eye margin in profile, distance subequal to length of second antennal segment. Proclinate fronto-orbital bristle absent, anterior reclinate fronto-orbital present and just less than one-tenth length of posterior reclinate bristle. Two vibrissae present. Cheek height in profile about 0.2–0.3 X length of third antennal segment.

Thorax: Apical scutellar marginal bristles moderately well developed, subequal in length to basal marginals. Fore femur with one moderately developed anteroventral spine at apical two-fifths, length about 0.5 X maximum femoral diameter; posterodorsal and posteroventral bristles at similar position, posterodorsal weakly developed but posteroventral much longer and more strongly developed. Mid tibia without dorsal pre-apical bristle. Wing markedly narrow (similar to Fig. 5 in Barraclough 1997: 26).

Abdomen: T2 median marginal bristles about 1.5 X length of T1+2.

Female postabdomen: Not dissected.

Discussion: *Afrocamilla malgasensis* is the sister species of *A. artopenna* Barraclough, 1997, from Ndumu Reserve, northern KwaZulu-Natal. Nothing is known about the biology of these species. According to Danielsson (*pers. comm.*), *A. malgasensis* was swept from vegetation along the east bank of the Breede River. Both species have a characteristically short and broad frons, the wing unusually narrow, and the basal scutellar marginal bristles subequal in length to the apical marginals. *A. malgasensis* is a substantially darker species than *A. artopenna*, with the head and thorax being mainly dark brown to black; also, unlike *artopenna* in which the legs are entirely pale, the mid and hind femora are mainly brown. *A. malgasensis* also differs from *A. artopenna* in having the upper orbital plate sharply pointed and not rounded apically, and in having substantially longer postocellar bristles (1.5 X length of ocellar triangle, as opposed to about 0.8 X in *artopenna*). *A. malgasensis* should exit at *A. artopenna* in my 1997 key, although the frons is not as markedly short and broad.

ACKNOWLEDGEMENTS

I am indebted to Dr Roy Danielsson (Zoological Museum, Lund) for the loan of *Afrocamilla* material upon which this paper is based, and for information about localities. I thank Ms Sarah Pryke for completing the artwork. I am indebted to the Foundation for Research Development (FRD) for continued financial assistance. Dr B. R. Stuckenberg (Director *emeritus*, Natal Museum) critically reviewed an earlier draft of this paper.

REFERENCE

- BARRACLOUGH, D. A. 1997. The South African species of *Afrocamilla* Barraclough, 1992 (Diptera: Schizophora), a genus of Camillidae associated with rock hyrax latrines. *Annals of the Natal Museum* 38: 21–53.